



Quercus rubra L. **Northern red oak, red oak.**

Fagaceae (Beech Family)

Blooming season: May-June.

Plant:

Michigan Big Tree record is 276" girth, 100' tall,
Allegan County.

Commonly 20-30 m tall with a diameter of 40-100
cm, often living to 300 years.

Hard, strong, reddish brown, coarse grained wood.
Wood is ring porous.

Lower trunk usually clear of dead branches.

Winter buds shiny reddish brown, mostly hairless, 75mm long, clustered at tip of twig.



Leaves:

Alternate, deciduous simple leaves.

Easy to identify as an oak, but more difficult as to species.

Shallow lobes, broadest at base, bristle tipped.

Sinuses usually no deeper than halfway to main vein, 'V' shaped.

Leaves dull green above, lighter below.

Flower:

Monoecious, flowers as leaves unfold, frequently on same branch.

Male flowers yellow-green catkins, 10-13 cm long, yellow anthers.

Female flowers bright green, 0.5 mm long, usually single or paired.

Wind pollinated.

Fruit:

Acorn, to 2 cm long, smooth and shiny, pointed tip.

Often bicolored, portion near cap light green maturing to dark brown; tip area light brown maturing to reddish brown.

Cap covers less than 1/3 of acorn, saucer like on end of acorn.

Ripens October-November of second year.

White kernel.

Can be confused with:

White oak family has leaves with rounded lobe ends, and have acorns maturing their first season, and therefore are generally not found on the tree in winter. Red oaks hybridize readily with other members of subgenus *Erythrobalanus*, the black oaks. The following quote is included due to its particular relevance: "Oak leaves are extremely variable (in size, shape, and pubescence) from one part of the same tree to another, and from one tree to another of the same species. Leaves growing in the shade, as deep in the canopy or on lower branches, are often less deeply lobed than those receiving full sun, as on upper branches. Leaves on vigorous sprouts ... may appear quite unrecognizable. Add the fact that oaks frequently hybridize with other species of the same subgenus.... Immature (e.g. flowering)

Kasey Hartz Natural Area Reference Sheet



Muskegon Community College

Quercus rubra L.

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specimens are usually impossible to name....” (Voss 1985, pp. 72-3). Mature acorns are helpful in differentiating species present, but if found on the ground do not identify the actual tree. Winter buds can also be helpful, but usually difficult to examine due to height.

Geographic range:

Type specimen location:

State: Throughout, reaching greatest size in extreme southern portion of Lower Peninsula.

Regional: Southern Quebec and Ontario westward to Michigan and southeastern Nebraska,, south to northern Georgia. “One of the largest and most generally distributed trees of northern states....” (Sargent 1965, Vol. 1, p.243.)

Habitat:

Local: More moister sections of Kasey Hartz Natural Area

Regional: Rich mesic woods, sandy plains and woods. Tolerates colder climate than Michigan’s other oaks.

Common local companions:

Other oaks and cherry

Usages:

Human: Native Americans used the acorns as food, after leaching out much of the tannin. The bark was used in preparations to be used: as a febrifuge; eyewash; treatment for both heart and bronchial trouble; for sore throats; and as an antiseptic. A medicine for dysentery was made from twigs. The outer bark was used to make a brownish-red dye and for tanning leather. The American colonists made a yellow dye from the bark; used the bark in tanning leather; and used the potash, boiled with water to treat cancer (as a poultice) They used the wood for fencing, as it resistant to decay and as an excellent firewood. Wood is still used in construction, for staves of dry storage barrels, paneling, etc., and as firewood. It is now a popular landscape tree, as it transplants readily, is resistant to air pollution, and grows relatively quickly.

Other animal: Although not as favored as white oak, the acorns are readily eaten by deer, wild turkeys, squirrels, chipmunks, raccoons, black bears, and blue jays. Acorns form a very important winter food source, constituting “a good and abundantly available staple”, which is why they appear on so many favorite food lists of animals (Martin *et al* p. 308). Periodical cicadas prefer its twigs, along with other oaks, to lay their eggs on. The gypsy moth also prefers oaks for nurseries.

Why is it called *that*?

Quercus is the old Latin for the name of a specific European oak. *Rubrum* is Latin for red. Oak is the Anglo-Saxon word for oak tree.

Prepared by: Barbara Lukacs Grob April 2008